

REMARKS

Claims 1 – 26 are pending in the application. Claim 1 is amended and no new matter is added. Claim 10 has been canceled, Claims 18-26 are withdrawn, leaving Claims 1 – 9 and 11 – 26 for consideration upon entry of the present amendment.

Claim 1 has been amended to better define the invention. Support for the amendment to Claim 1 can be found in Claim 10 as originally filed.

Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Rejections under 35 U.S.C. § 102 (e)

Claims 1-5, 7-9, and 11 stand rejected under 35 U.S.C. § 102 (e) as allegedly being anticipated by US 2003/0107865 to Masuda et al. (Masuda) (Office Action dated 08/31/06, page 4). Applicants respectfully disagree.

To anticipate a claim under 35 U.S.C. ' 102, a single source must contain all of the elements of the claim. *Lewmar Marine Inc. v. Bariant, Inc.*, 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1007 (1988).

The claimed invention is directed to a wafer processing device comprising a platform for supporting an object to be heated, wherein the platform is comprised of graphite; a shaft extending substantially transverse to the platform, wherein the shaft is comprised of graphite; and further wherein the graphite shaft and the graphite platform form a single unitary body (see Claim 1).

Masuda is directed to a wafer handling device having a coating layer consisting essentially of a non-crystalline carbon (DLC) (see Abstract). Masuda in Figure 1 teaches a wafer handling device having a graphite substrate 1 surrounded by an insulating material 2 such as pyrolytic boron nitride (see Col. 1, paragraph [0005]). Masuda teaches that

wafer handling device may further include electrodes 3 of pyrolytic graphite (PG) or other conductive material superimposed upon or imbedded within the handling device body in a predetermined pattern, and an insulating separator or coating layer 4 surrounding the handling device body for separating the conductive electrodes 3 from

the workpiece.
(Col. 1, paragraph [0005])

Masuda in Figures 1, 2 or 3 clearly does not show a wafer handling device where the graphite shaft and the graphite platform form a single unitary body. The claimed invention in contrast is directed to a graphite platform and graphite shaft that form a single unitary body. Masuda thus, does not only not teach the claimed invention; it actually teaches away from the claimed invention. For this reason at least, Masuda cannot anticipate the claimed invention. Applicants respectfully request a withdrawal of the anticipation rejection and an allowance of the claimed invention over Masuda.

Rejections under 35 U.S.C. § 103

Claims 1-5, 7-10, are rejected under 35 U.S.C. § 103 (a) as allegedly being unpatentable over U.S. Patent No. 6,113,984 to MacLeish et al. (MacLeish) in view of U.S. Patent No. 5,478,436 to Honma et al. (Honma) (Office Action dated 08/31/06, page 6). Applicants respectfully disagree.

In making the rejection, the Examiner has stated that “MacLeish further teaches that the support 115 and the shaft 116 are made from graphite (Col. 13, lines 45 – 60)” (Office Action dated 08/31/06, page 6). The Examiner also states “[R]egarding Claim 10, MacLeish teaches that the graphite shaft 116 and the graphite susceptor platform 115 form a single unitary body” (Office Action dated 08/31/06, page 8). The Examiner also states that “it is known to use either individual parts and assemble them into a sub-assembly or use unitary structure of multiple parts.....(Col. 13, lines 56 – 65)” (Office Action dated 08/31/06, page 8).

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai*

Pharmaceuticals Co., 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

MacLeish teaches a CVD reactor comprising separate reaction and pressure chambers. (see Abstract) As noted above by the Examiner, in Col. 3, lines 45 – 60, MacLeish further teaches that the support 115 and the shaft 116 are made from graphite. The description in Col. 3, lines 45 – 60 pertain to Figures 14 and 15, where it can clearly be seen that the support 115 and the shaft 116 are not a unitary piece. The Examiner's description of MacLeish as teaching a unitary support and shaft is therefore inaccurate. Similarly, Figures 1 and 2 which also support depicts platforms do not show the support and the shaft as being a single piece. For this reason at least, MacLeish does not teach all elements of the claimed invention.

Honma teaches an electrostatic chuck and method for electrostatically clamping a working member such as a semiconductor wafer to the chuck. (see Abstract) The electrostatic chuck includes at least one conductive electrode and an insulating layer for separating the conductive electrode from the working member. (see Abstract). Honma in its Figure 3 teaches a graphite body 21 having a rectangular configuration (see Col. 3, lines 45 – 48). Honma teaches that the graphite body 21 functions as a substrate upon which a layer of pyrolytic boron nitride is coated with chemical vapor deposition. (see Col. 3, lines 48 – 50) Honma does not teach a shaft as presently claimed. More specifically, Honma does not teach any unitary support and shaft, wherein the support and the shaft are both manufactured from graphite. Honma therefore does not make up for the deficiency of MacLeish and the combination of MacLeish with Honma does not equal the claimed invention.

In addition, Honma, in teaching a wafer handling device without a shaft, teaches away from MacLeish, and one of ordinary skill in the art would not be motivated to combine Honma with MacLeish.

For this reason at least, Applicants believe that the Examiner has not made a prima facie case of obviousness over MacLeish in view of Honma. Applicants respectfully request a withdrawal of the obviousness rejection and an allowance of the claims.

Claim 6 is rejected under 35 U.S.C. § 103 (a) as allegedly being unpatentable over MacLeish in view of Honma and further in view of U.S. Patent No. 6,973,767 to Chu et al. (Chu) (Office Action dated 08/31/06, page 8). Applicants respectfully disagree.

As noted above, neither MacLeish nor Honma teach a unitary support and shaft, wherein the support and the shaft are both manufactured from graphite. Chu teaches a wafer stage comprising an electrostatic chuck and a method for dechucking (see Abstract).

Chu, in its Figure 2, teaches that the wafer stage 180 includes an electrostatic chuck support 140 on the bottom of the process chamber 160, an electrostatic chuck 100 on the electrostatic chuck support 140, a lifting means 110 within the electrostatic chuck 100 and a grounding means 120 for electrically grounding the lifting means 110 (see Col 4, lines 31 – 36). Chu, like MacLeish and Honma does not teach a unitary support and shaft, wherein the support and the shaft are both manufactured from graphite. Chu therefore does not correct for the deficiency of MacLeish and Honma. Applicants respectfully request a withdrawal of the obviousness rejection and an allowance of the claims.

Claims 11, 12, 15 and 16, are rejected under 35 U.S.C. § 103 (a) as allegedly being unpatentable over MacLeish in view of Honma as applied to Claim 1 and further in view of U.S. Patent No. 5,478,429 to Komino et al. (Komino) (Office Action dated 08/31/06, page 9). Applicants respectfully disagree.

Komino discloses a plasma processing apparatus with a susceptor having “[a] susceptor support base 31 having, e.g., a columnar shape and consisting of a conductive metal, e.g., aluminum, is disposed at a central portion of the bottom surface of the process chamber 2.” (col. 4, lines 2-24). In Komino, the susceptor “[consists] of a conductive metal such as aluminum” (col. 4, line 25). As illustrated in Komino’s Figure 1, the susceptor base 12, which supports the susceptors 13 is not a shaft. Komino also therefore does not teach a unitary support and shaft, wherein the support and the shaft are both manufactured from graphite as presently claimed. Komino also therefore does not correct for the deficiency of MacLeish and Honma. Applicants respectfully request a withdrawal of the obviousness rejection and an allowance of the claims.

Claims 13 and 14, are rejected under 35 U.S.C. § 103 (a) as allegedly being unpatentable over MacLeish in view of Honma and Komino as applied to Claim 11 and further in view of U.S. Patent No. 5,811,820 to Kirchner et al. (Kirchner) (Office Action dated 08/31/06, page 10). Applicants respectfully disagree.

Kirchner teaches a device for the parallel processing of ions (see Abstract). The device may be utilized for thin film deposition or ion implantation and may include the following: an ion source, ion capture and storage ion optics, mass selection ion optics, neutral trapping elements, extraction ion optics, beam neutralization mechanisms, and a substrate on which deposition and thin film growth occurs is provided. (see Abstract) Kirchner, like Komino, does not teach a unitary support and shaft, wherein the support and the shaft are both manufactured from graphite as presently claimed. Kirchner does not correct for the deficiency of MacLeish in view of Honma and Komino.

Additionally, Kirchner is not analogous art. For the purposes of evaluating obviousness of claimed subject matter, the particular references relied upon must constitute “analogous art”. *In re Clay*, 966 F.2d 656, 659, 23 U.S.P.Q.2d 1058, 1060-61 (Fed. Cir. 1992). The art must be from the same field of endeavor, or be reasonably pertinent to the particular problem with which the inventor is involved. *Id.* Kirchner deals with the transport of ions, which is not from the same field of endeavor nor is pertinent to the problem with which the inventor is involved. There is therefore no motivation for one of ordinary skill in the art to combine Kirchner with either MacLeish, Honma or Komino. Applicants believe that the Examiner has not made a prima facie case of obviousness over MacLeish in view of Honma and Komino as applied to Claim 11 and further in view of Kirchner. Applicants respectfully request a withdrawal of the obviousness rejection and an allowance of the claims.

Claims 17 is rejected under 35 U.S.C. § 103 (a) as allegedly being unpatentable over MacLeish in view of Honma and Komino as applied to Claim 11 and further in view of U.S. Patent Application No. 20030217767 to Kushihashi (Office Action dated 08/31/06, page 11). Applicants respectfully disagree.

The Examiner indicates that Kushihashi discloses a first electrical conductor in a form

of a graphite rod and a second electrical conductor in the form of a hollow rod, wherein the first and second conductors are separated by a layer of pyrolytic boron nitride ('pBN') (Office Action dated 08/31/06, page 11).

Kushihashi does show in Figure 2 suggest a first electrical conductor in the form of a graphite rod 9, a second electrical conductor being a hollow rod 7 – which is made of metal or ceramic (column 1, line 5 of paragraph 5). The first and second conductors are separated by an electrically insulating material 8 comprising pBN (see Figure 2).

Kushihashi, like Komino and Kirchner, does not teach a unitary support and shaft, wherein the support and the shaft are both manufactured from graphite as presently claimed. Kushihashi does not correct for the deficiency of MacLeish in view of Honma and Komino and further in view of Kushihashi. Applicants believe that the Examiner has not made a prima facie case of obviousness over MacLeish in view of Honma and Komino as applied to Claim 17 and further in view of Kushihashi. Applicants respectfully request a withdrawal of the obviousness rejection and an allowance of the claims.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-2339.

Respectfully submitted,

/David E. Rodrigues/
David E. Rodrigues
Registration No. 50,604



Hanh T. Pham
Reg. No. 40,771

Date: January 8, 2007
General Electric Company
One Plastics Avenue
One Plastics Avenue
Pittsfield, MA 01201
(413) 448-4664